

Spring 4-28-2016

## Bachelor of Liberal Studies Degree Option for Pre-Dental Undergraduates at Bowling Green State University

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Bowling Green State University  
Honors College

# Bachelor of Liberal Studies: Pre-Dentistry

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HNRS 4990

Advisors: Dr. Heath Diehl – Rachel Flick



# Why Dentistry?

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The *U.S. News & World Report* listed Dentist as the #1 profession in its [100 Best Jobs](#) list in 2015. In 2016 Dentist was listed as the #2 profession dethroned only by Orthodontist, a profession that requires a dental school degree!

## 1. Fulfillment

Dentists improve the oral and subsequently the overall health of several people every day. Additionally, dentists work with their hands. This allows them to see the fruit of their labor on a daily basis by removing teeth or filling cavities, as well as, on a long-term basis by improving the health of long term patients who require extended treatment plans. Many dentists also have the time and resources to serve both local and international communities in need to oral health services.

## 2. Independence

Dentists have the ability to work as a partner within an existing practice, as an independent employee, or open their own business. Whether you like to work as an employee, within a small group, or as your own boss, dentistry can be an option for you.

## 3. Income

In 2012, the average net income for an independent private general practitioner who owned all or part of his or her practice was \$202,760, and \$303,790 for dental specialists, according to the ADA Health Policy Resource Center 2013 *Survey of Dental Practice*. Incomes vary across the country and depend on the type of practice.

## 4. Multiple Career Options

There are nine recognized dental specialties that can be pursued after completion of dental school. Dental specialists go through more schooling, but often earn much higher salaries and can enjoy even more flexibly schedules in some cases.

- **Dental Public Health** - The study of dental epidemiology and social health policies.
- **Endodontics** - Root canal therapy and study of diseases of the dental pulp.
- **Oral And Maxillofacial Pathology** - The study, diagnosis, and sometimes the treatment of oral and maxillofacial related diseases.

- **Oral And Maxillofacial Radiology** - The study and radiologic interpretation of oral and maxillofacial diseases.
- **Oral And Maxillofacial Surgery** - Extractions, implants, and facial surgery.
- **Orthodontics And Dentofacial Orthopedics** - The straightening of teeth and modification of midface and mandibular growth.
- **Periodontics (Also Periodontology)** - Study and treatment of diseases of the periodontium (non-surgical and surgical) as well as placement and maintenance of dental implants
- **Pediatric Dentistry (Formerly Pedodontics)** - Dentistry for children
- **Prosthodontics** - Dentures, bridges and the restoration of implants. Some prosthodontists further their training in "oral and maxillofacial prosthodontics", which is the discipline concerned with the replacement of missing facial structures, such as ears, eyes, noses, etc.

## 5. Flexible Lifestyle

Dentistry offers work schedule flexibility. Some dentists decided to only work one or two days a week if they are satisfied with the income. This means that if you would like to spend more time with your family or pursue really anything else, dentistry is a career path that allows you to do just that.

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# Introduction

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Dental schools across the United States are tasked with the challenge of preparing their students to become excellent dental practitioners. However, success within the field of dentistry requires many other skillsets. The skillsets required to practice dentistry must be supplemented with communication skills, interpersonal skills, critical thinking, a strong business sense, and countless other skillsets.

Undergraduate coursework and experiences provide opportunities for students to develop these qualities before their dental school education. While most students choose a traditional *science based* undergraduate degree such as biology, chemistry, or applied health science, the bachelor of liberal studies degree option allows students the flexibility to create a *hand crafted* education that will directly support the knowledge gained in dental school.

This degree option includes the required prerequisite coursework for the five dental schools included in this packet, as well as, different tracks that students can choose from to complete their coursework: communication, business, entrepreneurship, health, honors, and science. *See Optional Tracks...*

Selecting this degree option can be beneficial to student in two main ways:

- 1) Success in Undergraduate Experience
  - a. Students are able to focus on courses that are directly applicable towards their future career and/or their degree completion
  - b. Students will be able to manage time effectively contributing to learning from extracurricular experiences such as campus involvement, research, internships and job experience
- 2) Applying to Dental School
  - a. Students can be confident that they are completing the required pre-requisites for their choice dental schools
  - b. Students will be able to stand out from their peers with a unique and intentional education
  - c. Students will be able to point to the practical skillsets they acquired during their undergraduate experience that makes them a well-rounded candidate

# Background Information

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## **This is an OPTION for Pre-Dental Students**

This document is not intended to be the degree plan for EVERY pre-dental student. The introduction to this document explains the benefits of selecting this plan, however, this degree plan should not be considered a *better* or *optimal* option for pre-dental students; it is simply a *different* option. Pre-dental student pursuing traditional degrees such as biology or chemistry do not have an advantage or disadvantage relative to students who choose to pursue the liberal studies degree. They have simply chosen a *different* degree option.

## **Dental School Prerequisites Page**

The five schools on the “Dental School Prerequisites” page were selected because they are the schools most commonly applied to by students from BGSU. The reason that these schools are often selected is based on a variety of factors. The main factors include: location, cost of tuition, DAT scores of previously admitted students, GPAs of previously admitted students, and college prestige. This is not an exhausted list. Students should research every school in the country and apply to the ones that appeal to their preferences. The American Dental Education Association (ADEA) annually creates an “Official Guide to Dental Schools” which can help narrow down the student’s options. [ADEA Official Dental School Guide](#)

## **The Two Most Important Numbers**

GPA and dental admission test (DAT) scores are far and away the two single most important numbers when applying to dental school. Dental schools are ranked primarily on these figures and therefore the quality of the accepted students is a public reflection of the quality of the school. This brings up an interesting argument regarding the quality of a candidate’s application based on their coursework and GPA. Some schools value intensity of coursework including higher-level biology courses even if GPA suffers. Other schools are solely interested in seeing a high GPA within the required prerequisites, and thus are less interested in higher-level science coursework. In order to be successful, students must focus on balancing the intensity of their coursework while maintaining a high GPA.

# Using the Degree Checklist

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## Step 1: Understand Courses Included in Checklist

### I. Required at ALL schools

- 1) Biology - BIOL 2040, 2050
- 2) Chemistry - CHEM 1250, 1270, 1280
- 3) Biochemistry - CHEM 4460
- 4) Microbiology - BIOL 3130
- 5) Organic Chemistry - CHEM 3410, 3440, 3450
- 6) Physics I - PHYS 2010
- 7) English - GSW 1220

### II. Required by Individual School

- 1) Anatomy and Physiology - BIOL 3310, 3320 (Ohio State)
  - STRONGLY recommended at ALL schools
- 2) Psychology - PSYC 1010 (Michigan)
- 3) Sociology - SOC 1010 (Michigan)
- 4) Physics II - PHYS 2020 (Case Western, Michigan)

## Step 2: Add *Strongly Recommended* Courses from Individual School of Interest

### I. Strongly Recommended by Individual Schools

- 1) Case Western
  - Advanced Writing
  - Statistics
  - Genetics
  - Cell Biology
  - Neuroscience
- 2) Kentucky
  - Cell Biology
  - Genetics
  - Immunology
  - Molecular Biology
- 3) Louisville
  - Cell Biology
  - Histology
  - Immunology
- 4) Michigan
  - All Included in Checklist
- 5) Ohio State
  - Advanced Writing



### **Step 3: College of Arts & Sciences and Liberal Studies Requirements**

- I. [Arts & Sciences](#)
- II. [Bachelor of Liberal Studies](#)

### **Step 4: Add Optional Tracks**

- I. Art
- II. Business
- III. Communication
- IV. Entrepreneurship
- V. Honors
- VI. Public Health
- VII. Science

### **Step 5: Student Option**

- I. Add any electives student wants to pursue

# Bowling Green State University

## Bachelor of Liberal Studies Pre-Dentistry

College of Arts & Sciences  
Spring 2016

### BG Perspective (BGP) Requirements

Total BGP credits must be at least 36

Course	Credits
English Composition and Oral Communication GSW 1120	3
Quantitative Literacy	
_____	_____
Natural Sciences	
CHEM 1250	5
CHEM 1270/1280	4/1
International Perspective	
_____	_____
Humanities and the Arts	
_____	_____
_____	_____
Social and Behavioral Sciences	
PSYC 1010	4
SOC 1010	3

### University Requirements

Cultural Diversity in U.S.	
_____	_____
Expanded Perspective	
_____	_____
<b>Total BGP (36)</b>	_____

### Arts & Sciences Requirements

4 Semesters Required

Foreign Language (____ years of High School _____)	
_____	_____
_____	_____
_____	_____
_____	_____

### \*Required Prerequisites "Most" Schools

Anatomy & Physiology	BIOL 3310, 3320	8
Biochemistry	CHEM 4460	3
Biology	BIOL 2040, 2050	10
Chemistry	CHEM 1250, 1270/1280	10
Organic Chemistry	CHEM 3410, 3440/3450	10
English	GSW 1120	3
Microbiology	CHEM 3130	4
Physics	PHYS 2010	5

\*See required prerequisites for each specific school p. 4

### 100 Hours in Arts & Sciences

No more than 27 hours from any one department

Course	Credits
BIOL 2040	5
BIOL 2050	5
PHYS 2010	5
PHYS 2020	5
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
<b>Total</b>	_____

### 40 Hours at 3000/4000 Levels

Course	Credits
BIOL 3310	4
BIOL 3320	4
CHEM 3410	5
CHEM 3440/3450	3/2
BIOL 3130	4
CHEM 4460	3
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
<b>Total 3000/4000</b>	_____
<b>Total Hours (122)</b>	_____

# Optional Tracks

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Completion of the required prerequisite courses for dental school is a commitment of 65 hours. These 65 hours are already outlined in the “Degree Checklist.” This leaves roughly 60 hours to pursue any type of coursework the student chooses to reach their required 125 hours.

The tracks below offer students a *rough guide* in choosing their remaining 60 hours. The tracks are simply courses taken from different departments that were identified as applicable to the educational needs of future dental professionals. Students do not have to take all of the courses in any given track. For example, students could take one course from each track if they choose.

These courses are NOT required prerequisites for dental school.

*\*Students should be meeting with their advisor frequently to make sure that they are on track to meet all of the requirements of the College of Arts and Sciences.\**

## 1 - Art (12 Hours)

One of the major learning curves for dental students is the development of their hand skills. Dentistry is an art. The physical portion of the job is partially cosmetics. Working with clay, molds, wood, glass, etc can help students develop their perceptual abilities and their hand skills. The skillset of being able to manipulate material is vital to a dentist's future career.

### [Arts Minor \(21 Hours\)](#)

Arts	Description	Credits
ARTS 2710	Ceramics I	3
ARTS 3720	Ceramics II	3
ARTS 2910	Modeling and Mold Making	3
ARTS 3920	Carving	3

## 4 - Business (21 Hours)

Upon shadowing many dentists, the most common piece of advice that I got was to get a solid business education. The financial success of a practice is largely dependent on the business knowledge guiding the practice. Completion of this track is adequate for a business minor.

### [Business Minor \(21 Hours\)](#)

Bunsines	Description	Credits
ACCT 2210	Accounting I	3
ACCT 2220	Accounting II	3
ECON 2020	Microeconomics	3
ECON 2030	Macroeconomics	3
FIN 3000	Business Finance	3
MGMT 3050	Principles of Management	3
MKT 3000	Marketing	3

## 3 - Communication

Developing communication skills is an incredibly important part of a dentist's job. They must be able to communicate to their fellow dentists, dental hygienists, and their clients.

### [Communications Minor \(21 Hours\)](#)

Communication	Description	Credits
COMM 1020	Intro to Public Speaking	3
COMM 2030	Small Group Communicaiton	3
COMM 2050	Business and Professional Speaking	3
COMM 2070	Interpersonal Communication	3
COMM 3070	Organizational Communication	3
COMM 4440	Health Communication	3

## 4 – Entrepreneurship

One of the options for dental professionals is to start their own practice. Developing the skillsets of the entrepreneur can help dentists pursue this career path. Completion of this track is adequate for an entrepreneurship minor.

### [Entrepreneurship Minor \(15 Hours\)](#)

Entrepreneurship	Description	Credits
ESHP 2040	Intro to Entrepreneurship	3
ESHP 3040	The Idea	3
ESHP 3140	The Sell	3
ESHP 3240	The Pre-Launch	3
ESHP 4040	The Launch	3

## 5 – Honors

Critical thinking is a vital skillset for all future dentists. They will need this skill in order to tackle a variety of changes in their field. Further, working on an honors project can help students develop their research skills. Depending on the school students choose to pursue, the idea of *pushing their field forward* will be a priority for certain colleges. Students who have research experience or have worked on an honors project will be more attractive to dental schools, and more importantly, will have developed a skillset that helps them contribute to the field of dentistry.

### [Graduating with Honors](#)

Honors	Description	Credits
HNRS 2010	Critical Thinking	4
HNRS 2020	Great Ideas	3
HNRS 4980	Honors Project	1
HNRS 4990	Honors Project	2

## 6 – Public Health

Dentistry is a health field. It is important for dentists to be aware of the future challenges for health care professionals.

### [Public Health Minor](#)

Health	Description	Credits
AHS 4010	Issues in Health Care	3
FN 2070	Nutrition Health and You	3
PUBH 3300	Intro to Public Health	3

## 7 – Science

More advanced science courses can help students gain knowledge that will help them perform in the classroom in dental school. Coursework in dental school can be very difficult. Students who have taken these courses will have the advantage of studying the material before other dental students. Receiving good grades in these courses will help to show admissions counselors that the student is likely to be successful in dental school.

### [Science Minor](#)

Science	Description	Credits
CHEM 4470	General Biochemistry II	3
PHYS 2020	College Physics II	5
BIOL 4070	Cell Biology	4
CHEM 3520	Physical Chemistry	3

# Extracurricular Experiences

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Coursework is the cornerstone of the pre-dental undergraduate education, but they are not the only necessities of a strong candidate. Pre-dentistry students have many requirements outside of the classroom that advisors should be aware of when making course suggestions each semester.

## Shadowing

Students are required to shadow dentists as part of their application. This allows students to get a better understanding of the field that they are getting into. They are able to ask dental professionals questions about their career and get a better understanding of that they will be doing day to day. Most students shadow dentists, orthodontists, oral surgeons and other dental professionals for an average of between 40-100 hours before applying to dental school. The amount hours can be daunting, but scheduling these shadowing hours around their work and class schedules can be nearly impossible.

## Dental Admissions Test (DAT)

The DAT is every bit as challenging as the MCAT required for medical school. Students prepare anywhere from 3 months to a year in preparation. Time spent studying for this test should not be taken lightly and students should not take a heavy course load while preparing for the DAT. The minimum DAT score for applying to dental school is roughly a 17, with the average accepted student scoring around a 20.

## Volunteering

Dentistry is a service field and students should be demonstrating volunteer experience. Many successful applicants log hundreds of hours towards the programs they are passionate about. Executive positions that require a lot of time should be a consideration when choosing coursework as well. Volunteering can be applicable to the field of dentistry or not. For example, if you enjoy working with the elementary students, you could volunteer at an after school program. If you want to do something related, you could collect toothbrushes and distribute them to a community in need.

## Working

Many students will also be balancing jobs. Students should make sure that they will have ample time to be successful in their coursework while keeping up on their living expenses.

## Campus Involvement

Students should be participating in some type of student organization such as DDS the pre-dental org or MedLife, which focuses on medical service trips. These experiences will benefit their application, but may also complicate responsibilities. Getting involved in student

government, service organization, or even athletic clubs can all help a student stand out when it comes to applying to dental school. College is a full-time job, but it should also be fun and getting involved on campus can have a positive affect on a student's social life and feeling of being connected to BGSU.



# FAQ

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## **Do I need a specific degree to apply to dental school?**

There is no specific degree requirement for matriculation to dental school. As long as the student completes the required prerequisites for a given school, it does not matter which specific degree they choose to pursue. The most common degree choices for pre-dentistry students are biology, chemistry, biochemistry, and applied health science. However, students pursuing liberal studies, 2D art, English, or any other degrees are eligible to apply.

## **What is a competitive GPA?**

Competitive applicants are between 3.6-4.0 for both their overall GPA and their GPA within science courses.

## **What is a competitive DAT?**

The average DAT of accepted students is just shy of a 20. Information about the DAT can be found here... [DAT Information](#)

## **How many schools should I be applying to?**

This is a personal preference. Some students decide to apply to 1 school, others decide to 30. There is a cost for applying to each school. In 2016, the flat rate for applying to the first school was \$340 with a \$90 charge for applying to each school after the first. Most schools take the majority of their from the state that they are located in. For example, Ohio State takes roughly 90 of its 105 admitted students from the state of Ohio with roughly 15 students coming from other states. This makes being admitted into “out of state” schools very difficult. However, each school is looking for different qualities and as an applicant, you have no idea which school is going to like your application.



Biology (2)  
 Chemistry (2)(L)  
 Organic Chemistry (2)(L)  
 Physics (L)  
 Microbiology  
 English  
 Biochemistry  
 \*Anatomy and Physiology (2)  
 \*Molecular Biology  
 \*Cell Biology  
 \*Genetics  
 \*Immunology



THE OHIO STATE  
 UNIVERSITY

Anatomy and Physiology (2)  
 Advanced Writing  
 Biochemistry  
 Biology (2)  
 Chemistry (2)(L)  
 English  
 Microbiology  
 Organic Chemistry (2)(L)  
 Physics



Biology (2)  
 Chemistry (2)(L)  
 Organic Chemistry (2)(L)  
 Physics (L)  
 \*Anatomy and Physiology (2)  
 \*Biochemistry  
 \*Cell Biology  
 \*Histology  
 \*Immunology  
 \*Microbiology



Biochemistry  
 Biology (2)(L)  
 Chemistry (2)(L)  
 English  
 Microbiology  
 Organic Chemistry (2)(L)  
 Physics (2)(L)  
 Psychology  
 Sociology



Biology (2)  
 Chemistry (2)(L)  
 Organic Chemistry (2)(L)  
 Physics (2)(L)  
 English (2)  
 \*Statistics  
 \*Anatomy and Physiology  
 \*Biochemistry  
 \*Microbiology  
 \*Genetics  
 \*Cell Biology  
 \*Neuroscience

2- Two Semesters Required  
 L- Lab Required  
 \*- Strongly suggested